

***Amendments to the Claims:***

This listing of claims will replace all prior versions, and listings, of claims in the above-captioned application.

**Listing of Claims:**

1. (currently amended) An instrumented antifriction bearing device comprising:  
  
\_\_\_\_\_ a rotating portion;  
  
\_\_\_\_\_ a nonrotating portion; and  
  
an assembly configured to for detecting rotation parameters, wherein the assembly comprises: comprising  
  
\_\_\_\_\_ an encoder (8); and  
  
a sensor (7), wherein the sensor is integrated integral with said the nonrotating portion, and wherein the sensor comprises: provided with  
  
a sensor unit; and (10), characterized in that the sensor comprises  
  
at least one microcoil (20), wherein a microcoil is a with substantially flat winding, and wherein the

microcoil is positioned ~~placed on a support (17) of a circuit (18) that is mounted coupled to in the sensor unit (10) of the nonrotating portion, and wherein such that said the microcoil comes is configured to be positioned~~ axially opposite the encoder (8).

2. (currently amended) The device ~~as claimed in of~~ claim 1, ~~characterized in that it comprises~~ further comprising a plurality of substantially radial coplanar reception microcoils.
3. (currently amended) The device ~~as claimed in of~~ claim 1, ~~characterized in that it comprises~~ further comprising a plurality of reception microcoils ~~placed positioned~~ on a plurality of substantially parallel radial planes.
4. (currently amended) The device ~~as claimed in any one of the preceding claims of claim 1,~~ ~~characterized in that it comprises~~ further comprising a transmission coil (19) ~~placed positioned~~ in the sensor unit.
5. (currently amended) The device ~~as claimed in any one of the preceding claims of claim 1,~~ ~~characterized in that~~ further comprising:

\_\_\_\_\_ at least one transmission coil;

\_\_\_\_\_ at least one reception coil; and

\_\_\_\_\_ a data processing circuit; ~~(18) are placed on the support.~~

wherein a transmission coil, a reception coil, and a data processing circuit are positioned on the support.

6. (currently amended) The device ~~as claimed in any one of the preceding claims~~of claim 1, characterized in that it comprises ~~further comprising~~ a plurality of microcoils linked together in pairs, ~~(24, 25)~~ and wherein the linking microcoils are configured in order to generate a differential signal.
7. (currently amended) The device ~~as claimed in any one of the preceding claims~~of claim 1, characterized in that wherein the encoder comprises an encoder wheel, and wherein the encoder wheel comprises an whose active zone, and wherein the active zone comprises is made of an electrically conducting metal.
8. (currently amended) The device ~~as claimed in any one of the preceding claims~~of claim 1, characterized in that wherein the encoder comprises an encoder wheel, and wherein the encoder wheel comprises with windows, or with teeth attached to a rotating race (3) of the antifriction bearing.
9. (currently amended) The device ~~as claimed in any one of claims 1 to 7~~of claim 1, characterized in that wherein the encoder comprises a printed circuit, and wherein the printed circuit comprises whose ~~an~~ annular substrate is ~~provided~~ with metallized sectors and nonmetallized sectors.
10. (currently amended) The device ~~as claimed in~~of claim 9, characterized in that wherein the printed circuit is ~~mounted~~ coupled to ~~on~~ a rotating ~~race~~track of the antifriction bearing.

11. (currently amended) The device ~~as claimed in any one of the preceding claims~~ of claim 1, characterized in that wherein at least one portion of the encoder is ~~placed~~ positioned in the space ~~situated~~ between the antifriction bearing ~~and~~ tracks.
12. (currently amended) The device ~~as claimed in any one of the preceding claims~~ of claim 1, characterized in that wherein the encoder is ~~placed~~ positioned outside the space ~~situated~~ between the antifriction bearing ~~and~~ tracks.
13. (currently amended) The device ~~as claimed in any one of the preceding claims~~ of claim 1, characterized ~~wherein~~ in that the sensor unit is substantially annular.
14. (currently amended) The device ~~as claimed in any one of claims 1 to 12~~ of claim 1, characterized in that wherein the sensor unit occupies an angular sector of less than approximately 360°.
15. (currently amended) An electric motor comprising:  
  
\_\_\_\_\_ a rotor;  
  
\_\_\_\_\_ a stator;  
  
at least one antifriction bearing, ~~(1)~~ wherein an antifriction bearing  
is configured to supporting the rotor; and  
  
\_\_\_\_\_ a sensor assembly comprising:  
  
\_\_\_\_\_ an encoder ~~(8)~~; and

a sensor ~~(7)~~, characterized in that wherein the sensor ~~(7)~~  
comprises:

at least one microcoil, ~~(20)~~ wherein a microcoil  
comprises an with essentially flat winding, and  
wherein a microcoil is positioned ~~placed~~ on a  
support ~~(17)~~ of a circuit ~~(18)~~ mounted coupled to in  
the sensor unit ~~(10)~~ integral integrated with the  
stator such that the microcoil ~~comes is~~ positionable  
axially opposite the encoder.

16. (new) The device of claim 1, wherein the encoder comprises an encoder wheel, and  
wherein the encoder wheel comprises teeth coupled to a rotating groove of the antifriction  
bearing.